

Title (en)
Fire-retardant low-density epoxy composition

Title (de)
Feuerhemmende Epoxydharzzusammensetzung mit geringer Dichte

Title (fr)
Composition époxy ignifugée à basse densité

Publication
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Application
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Priority
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Abstract (en)
The present invention relates to a curable precursor of a fire-retardant, low-density and essentially halogen-free epoxy composition comprising (i) 10 to 70 weight percent of at least one organic epoxide compound with an epoxide functionality of at least one, (ii) 1 to 55 weight percent of at least one epoxide hardener, (iii) 5 to 50 weight percent of an essentially halogen-free fire-retardant system that includes a mixture of: (1) at least one compound selected from the group comprising alkaline earth metal hydroxides and aluminium group hydroxides, and (2) at least one phosphorous-containing material, (iv) 10 to 60 weight percent of a filler system capable of reducing the density of the precursor that includes a mixture of (1) at least one low-density inorganic filler having a density of between 0.1 to 0.5 g cm⁻³, (2) at least one low-density organic filler having a density of between 0.01 to 0.30 g/cm⁻³ and being compressible.

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Citation (search report)
• [DA] EP 0693092 A1 19960124 - MINNESOTA MINING & MFG [US]
• [A] EP 0838499 A1 19980429 - MINNESOTA MINING & MFG [US]
• [A] US 4861643 A 19890829 - SCOLLARD CYNTHIA M [US]

Cited by
WO2021094292A1; EP3666812A1; EP3489271A1; CN114981386A; CN115595091A; WO2020121196A1; WO2020131946A1; US11667807B2; WO2019102335A1

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